M E M O R A N D U M

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SUBJECT: Operational Position Statement for the Week of April 9-15, 2013

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance. The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD's Operational Planning internet page.

Recommendation to the USACE

This week the SFWMD recommends the USACE continue to follow the 2008 LORS release guidance to manage the Lake stage, but suggests the USACE not release up to the maximum rates allowed. This week Part D suggests releases up to 3000 cfs at S-79 and up to 1170 cfs at S-80. However, since the stage is in the lower third of the Low Subband, the USACE's Water Control Plan provides further guidance: S-79 up to 2000 cfs, and S-80 up to 730 cfs. Part C of the 2008 LORS suggests up to maximum practicable releases to the WCAs if desirable or with minimum Everglades impacts.

The SFWMD recommends the following:
S-80: No Lake Okeechobee regulatory discharge. Discharge C-44 Basin runoff as required.
S-79: 450 cfs is an adequate flow rate according to SFWMD estuarine scientists. However if the USACE needs to make higher Lake O discharges to manage Lake stages per the 2008 LORS, then the SFWMD estuary scientists recommend not exceeding 1500 cfs since an average flow rate greater than 1500 cfs could be detrimental by causing low salinity shock to the estuarine biota.

As requested by the USACE, the SFWMD will initiate Lake O regulatory discharges to WCA-2A via STA-2 this week. STA-3/4 is not currently available to handle Lake O regulatory discharges. It is desirable to minimize releases from WCA-2A to reduce the recession rates. If WCA-2A stages rise appreciably, the SFWMD will open S-144, S-145, and S-146 as needed to help regulate WCA-2A stages.

Further details are provided below, which includes suggested alternative S-79 pulse-release patterns designed by SFWMD estuary scientists.

Weather and Climate

Rainfall during the past week totaled 1.20 inches district wide (through 7 am April 9th). 0.74 inches of rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for the past 30 days totaled 2.30 inches, which was below-average (21% below-average).

The SFWMD short-term weather forecast indicates near-average rainfall for next week, and below-average to possibly well below-average rainfall for the following week. The 31-Mar Climate Prediction Center (CPC) outlook for April shows equal chances of above-normal, normal, and below-normal rainfall.

For the three-month window April-May-June 2013 the available CPC outlook (21-Mar) shows slightly increased chances of below-normal rainfall for central and southern Florida. Beyond the Apr-May-Jun window the outlooks are for equal chances of above-normal, normal, and below-normal rainfall.

Current Conditions and Operations

The April 8, 2013 Lake Okeechobee stage (reported by the USACE on April 9th) was 13.72 feet NGVD, 0.06 feet lower than last week. The Lake stage is 0.39 feet lower than it was a month ago and is 1.66 feet higher than it was a year ago. The current stage is 0.42 feet below the historical average for this date. The stage is generally receding and is within the bottom third of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS). The current stage is about 0.23 feet above the top of the Baseflow Sub-band and about 2.2 feet above the water shortage band.

Water supply/irrigation releases from Lake O to the EAA have resumed at relatively low rates. Releases to the EAA had been suspended due to last Thursday/Friday rainfall. Releases from C-10A have been made for several weeks and continue. The releases were serving water supply needs of the L-8 Basin, the City of West Palm Beach via the M-Canal, and the Lake Worth Drainage District via S-5AE and S-155A. The SFWMD continues to discharge water from the southern end of the L-8 Canal (S-5AE/S5AW) to provide a dilution flow for water discharge by the Design Build Contractor (Archer Western) for the L-8 Flow Equalization Basin (FEB) {inflow structure, outflow structure and revetment}. The SFWMD expects to continue this operation until July.

2008 LORS Release Guidance (Part C): This week Part C suggests "releases to the WCAs if desirable or with minimum Everglades impacts". The LORS release guidance suggests releases because the Tributary Hydrologic Condition (THC) switched back to the normal classification. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. The Lake O Net Inflow remains in the dry classification; whereas the Palmer Index decreased slightly from the dry to the normal classification. SFWMD climate scientists estimate the Palmer Index will remain in the normal classification for at least the next week.

The SFWMD will initiate Lake O regulatory discharges to WCA-2A via STA-2 this week. STA-3/4 is not currently available to handle Lake O regulatory discharges. It is desirable to minimize releases from WCA-2A to reduce the recession rates. If WCA-2A stages rise appreciably, the SFWMD will open S-144, S-145, and S-146 as needed to help regulate WCA-2A stages.

This Lake O regulatory release operation will use S-351 to pass Lake regulatory discharge to the North New River Canal. The G-434 pump station will pump to the north buildout area (Cells 4, 5, 6) and subsequently discharge to WCA-2A via G-335. Hydrologic conditions and STA-2 treatment capability will be monitored and discharges adjusted as necessary.

2008 LORS Release Guidance (Part D): This week Part D suggests releases up to 3000 cfs at S-79 and up to 1170 cfs at S-80. However, since the Lake stage is within the lower third of the Low Subband, Page 7-15 of the Water Control Plan for Lake Okeechobee and the EAA indicates the target discharges are up to 2000 cfs at S-79 and up to 730 cfs at S-80.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance: This week the SFWMD's Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart is not applicable since the 2008 LORS release guidance suggests releases higher than baseflow releases.

SFWMD estuary scientists recommend that, given the time of year, an average flow rate of about 450 cfs is sufficient to maintain an acceptable salinity regime for the upcoming week. 450 cfs is also considered to be appropriate for long-term sustainability.

SFWMD estuary scientists also recommend not exceeding 1500 cfs since larger discharges could be damaging to some resources. Average flow rates between 450 cfs and 1000 cfs are not likely to be harmful. The releases should be made with a 10-day pulse pattern at S-79. The following release rates & patterns are suggested options:

Day	450 cfs	650 cfs	1000 cfs	1500 cfs
1	1100	1300	1700	2100
2	1600	1900	2300	2700
3	850	1300	1800	2300
4	500	900	1400	2000
5	350	700	1100	1700
6	100	400	800	1400
7	0	0	600	1100
8	0	0	300	800
9	0	0	0	600
10	0	0	0	300

Note that the AP release guidance flowchart was designed primarily to guide release recommendations for circumstances when the Lake stage is within the Baseflow Subband or lower. The USACE's Water Control Plan (WCP) for Lake Okeechobee and the EAA recognizes that the SFWMD may allocate water to the environment through its "Adaptive Protocols" or other SFWMD authorities. The WCP provides guidance as to releases, including Adaptive Protocol recommendations, in the various Lake schedule subbands.

There are two primary branches of the AP release guidance flowchart. The upper branch pertains to the 2008 LORS baseflow (aka, regulatory) releases while the lower branch pertains to environmental water supply releases. It is important to recognize that the AP was developed primarily to guide the water supply balance between Caloosahatchee Estuary, permitted water users, and other water supply purposes of the water control system. The water supply balance achieved by following the AP release guidance was evaluated by the Water Resources Advisory Commission and the SFWMD Governing Board, leading to board acceptance in September, 2010. Final Adaptive Protocols for Lake Okeechobee Operations (September 16, 2010).

For additional information pertaining to operations history and past recommendations, refer to the archives of LORS-2008 Release Guidance outcomes and operational position statements at www.sfwmd.gov under the Operational Planning topic.